

**STATE WATER RESOURCES CONTROL BOARD
BOARD MEETING SESSION--DIVISION OF WATER QUALITY
APRIL 3, 2007**

ITEM 4

SUBJECT

CONSIDERATION OF A RESOLUTION APPROVING AN AMENDMENT TO THE WATER QUALITY CONTROL PLAN FOR THE CENTRAL VALLEY REGION TO ESTABLISH A TOTAL MAXIMUM DAILY LOAD (TMDL) FOR NUTRIENTS IN CLEAR LAKE

DISCUSSION

Clear Lake is listed on the federal Clean Water Act (CWA) 303(d) list because it does not meet water quality standards. Elevated nutrient concentrations cause intense algal productivity episodes (nuisance blooms of blue-green algae). Studies indicate that excess phosphorus contributes to the occurrence of the algae blooms. On June 23, 2006, the Central Valley Regional Water Quality Control Board (Central Valley Water Board) adopted Resolution No. R5-2006-0060 ([Attachment](#)) amending the Water Quality Control Plan for the Sacramento and San Joaquin River Basins (Basin Plan) to establish a TMDL for nutrients in Clear Lake.

The existing designated beneficial uses for Clear Lake, which are impaired by nuisance algal blooms, include: municipal and domestic water supply, recreation (contact and non-contact), and warm freshwater habitat. The algal episodes also prevent the possible attainment of the designated potential cold freshwater habitat beneficial use.

Because Clear Lake is listed as not meeting water quality standards, section 303(d) of the CWA requires that a TMDL be established. A TMDL specifies load allocations for nonpoint sources and waste load allocations for point sources that, when implemented, are expected to result in attainment of applicable water quality standards. State law requires an implementation plan and schedule to ensure that the water quality objectives are met. The TMDL addresses the nutrient impairment and ensures that water quality standards will be achieved.

Most sources of excess phosphorus to Clear Lake are sediment driven and include:

- roads;
- agricultural activities;
- instream channel erosion;
- construction;
- gravel mining;
- wildfires and control burns;
- timber harvesting activities;
- livestock grazing;
- off-highway vehicles;
- dredging and filling;
- urban storm water runoff; and
- sewage and septic overflows.

The Basin Plan includes a narrative water quality objective for “biostimulatory substances” that states, “water shall not contain biostimulatory substances which promote aquatic growths in concentrations that cause nuisance or adversely affect beneficial uses.” The proposed amendment interprets the narrative objective by establishing a numeric target for Clear Lake. The TMDL uses chlorophyll-a to estimate algae growth. Chlorophyll-a is a chemical used by plants during photosynthesis and is present in algae. The TMDL target value is a maximum concentration of 73 micrograms per liter of chlorophyll-a, which in turn is based on results of a water quality model developed for Clear Lake.

The water quality model also calculated the TMDL load allocations for point and nonpoint source discharges. Based on this calculation, a phosphorus reduction of approximately 40 percent is necessary to reduce algae concentrations to meet the targets and thus to protect beneficial uses. Responsible parties assigned a waste load allocation are the California Department of Transportation (Caltrans) and the Lake County Storm Water permittees (Lake County, City of Clearlake, City of Lakeport). Load allocations are assigned to the U.S. Bureau of Land Management, U.S. Forest Service, Lake County, and irrigated agriculture.

The proposed amendment states that the Central Valley Water Board will implement phosphorus control practices to achieve load and waste load allocations through use of waste discharge requirements or waivers of waste discharge requirements. Within one year after TMDL approval by the Office of Administrative Law, responsible parties must submit a monitoring and control strategy. Responsible parties must comply with load and waste load allocations for phosphorus in Clear Lake within ten years of approval. The proposed amendment states that five years and three months after approval, the Central Valley Water Board will consider monitoring information and will determine whether the phosphorus load and waste load allocations should continue to be required or if some other control strategy or approach is more appropriate.

POLICY ISSUE

Should the State Water Resources Control Board (State Water Board) approve the amendment to the Basin Plan to establish a TMDL for nutrients in Clear Lake as adopted under Central Valley Water Board Resolution No. R5-2006-0060?

FISCAL IMPACT

Central Valley Water Board and State Water Board staff work associated with or resulting from this action will be addressed with existing and future budgeted resources.

REGIONAL WATER BOARD IMPACT

Yes, approval of this resolution will amend the Central Valley Water Board’s Basin Plan.

STAFF RECOMMENDATION

That the State Water Board:

1. Approves the amendment to the Basin Plan adopted under Central Valley Water Board Resolution No. R5-2006-0060.
2. Authorizes the Executive Director or designee to submit the amendment adopted under Central Valley Water Board Resolution No. R5-2006-0060, as approved, and the administrative record for this action to the Office of Administrative Law and the TMDL to U.S. Environmental Protection Agency for approval.

DRAFT

Revised March 6, 2007

STATE WATER RESOURCES CONTROL BOARD RESOLUTION NO. 2007-

APPROVING AN AMENDMENT TO THE WATER QUALITY CONTROL PLAN FOR THE CENTRAL VALLEY REGION TO ESTABLISH A TOTAL MAXIMUM DAILY LOAD (TMDL) FOR NUTRIENTS IN CLEAR LAKE

WHEREAS:

1. The Central Valley Regional Water Quality Control Board (Central Valley Water Board) adopted a Water Quality Control Plan for the Sacramento and San Joaquin River Basins (Basin Plan) under Resolution No. 94-380 on December 9, 1994, which was approved by the State Water Resources Control Board (State Water Board) on February 16, 1995, by the Office of Administrative Law (OAL) on May 9, 1995, and by the U.S. Environmental Protection Agency (USEPA) on May 26, 2000.
2. On June 23, 2006, the Central Valley Water Board adopted Resolution No. R5-2006-0060 ([Attachment](#)) amending the Basin Plan to establish a TMDL for nutrients in Clear Lake.
3. The Central Valley Water Board found that the environmental documents of the draft amendment language, staff report, and environmental checklist prepared by Central Valley Water Board staff complies with the requirements of the State Water Board's certified regulatory CEQA process, as set forth in the California Code of Regulations, Title 23, section 3775 et seq.
4. The Central Valley Water Board found that adoption of this amendment would result in no adverse effect on wildlife, and the amendment would be consistent with the State Antidegradation Policy (State Water Board Resolution No. 68-16) and federal antidegradation requirements.
5. The State Water Board finds that the Basin Plan amendment is in conformance with Water Code section 13240, which specifies that Regional Water Quality Control Boards may revise Basin Plans, and section 13242, which requires a program of implementation of water quality objectives. The State Water Board also finds that the TMDL as reflected in the Basin Plan amendment is consistent with the requirements of federal Clean Water Act section 303(d).
6. The Central Valley Board established the loading capacity of Clear Lake as an average annual phosphorus load of 87, 100 kilograms (kg) equaling an average TMDL of approximately 239 kg. Compliance with the phosphorus load will be based on a five year rolling average as established in the TMDL.
7. A Basin Plan amendment does not become effective until approved by the State Water Board and until the regulatory provisions are approved by OAL. The TMDL must also be approved by USEPA.

DRAFT

Revised March 6, 2007

THEREFORE BE IT RESOLVED THAT:

The State Water Board:

1. Approves the amendment to the Basin Plan adopted under Central Valley Water Board Resolution No. R5-2006-0060.
2. Authorizes the Executive Director or designee to submit the amendment adopted under Central Valley Water Board Resolution No. R5-2006-0060, as approved, and the administrative record for this action to OAL and the TMDL to USEPA for approval.

CERTIFICATION

The undersigned, Clerk to the Board, does hereby certify that the foregoing is a full, true, and correct copy of a resolution duly and regularly adopted at a meeting of the State Water Resources Control Board held on April 3, 2007.

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Clerk to the Board